

MATERIAL NO.:

CF-H40S+

DESIGNATION:

ISO: K40
US Industry: C11/C12

TECHNICAL TIP:

- » Excellent corrosion resistance in connection with the mechanical and physical characteristics required in die making
- » After wire cutting, place the parts for approx. 2-3 hours into a furnace with 100-110 °C max. to dry the binding material

CHEMICAL COMPOSITION (%):

WC	86.6
Co (bind. mat.)	11.8

PHYSICAL AND MECHANICAL CHARACTERISTICS:

- » Average WC grit size: fine
- » Density (ISO 3369): 14.15 g/cm³
- » Hardness (ISO 3878): 1400 HV10
- » Flexural strength (ISO 3327): 3200 MPa
- » Compressive strength: 4900 MPa
- » Elastic modulus: 551 GPa
- » Fracture toughness: 12.5 MPa m^{1/2}
- » Thermal conductivity at 100 °C: 90 W/mK
- » Coefficient of thermal expansion (20-400 °C): 5.4 10⁻⁶m/mK
- » Corrosion resistance: yes

CHARACTER:

- » The universal carbide grade - the ideal compromise between hardness and fracture toughness with high edge stability

APPLICATION:

- » Blocks for eroding, cutting punches, and dies with maximum wear resistance; active parts for stamping, embossing, bending, and forming

TREATMENT BY:

- » Polishing: highly suitable
- » EDM: suitable
- » Coating: suitable
- » Laser cutting: suitable

TYPICAL MICROSTRUCTURE VIEW:

